

with vehicle (left) or LPS, i.p. (right)) for visualization 1.5 hours post-dosing.

Figure 27. Thermography of HIV patient suffering from lipodystrophy vs. normal subject. A distinctive thermal profile, particularly of the face, where fat wasting is occurring, and the back of the neck, is visualized by IR thermography.

Figure 28. Interscapular brown adipose tissue (IBAT) thermogenesis in ob/ob mice 1 hour after treatment with the  $\alpha_1$ -adrenoceptor agonist BRL37344 detected by IR thermography. Ten week old male ob/ob mice (Jackson Labs, Bar Harbor, ME) were housed 5 animals/cage at 72° F and 50% relative humidity with a 12 h light and dark cycle. They were fed chow diet (NIH R&M/Auto 6F-Ovals 5K67, PMI Feeds® Inc., Richmond, Indiana) and water ad libitum. Mice were dosed at 0.0, 0.01, 0.1, 0.3, or 1 mg/kg BRL37344 in water vehicle (0.25 mL i.g.; n = 20 per dose). All animals were anesthetized with isoflurane and shaved to expose the area of interest prior to IR scanning. Half of the mice in each dose group (n = 10) had the skin covering the IBAT surgically removed ("peelback") and replaced with Bioclusive adhesive (Johnson&Johnson). Anesthetized mice were placed into a manifold with nose-ports for continual delivery of isoflurane. In order to maintain body core temperature during scanning, they were placed onto a tightly regulated heating table (37°C±0.05). The heating table was housed in an isothermal, non-reflective scanning chamber (24°C±0.05; 50% relative humidity). Upon closure of the chamber door, heat emissions from the IBAT area were acquired using a high resolution InSb IR scanning detector (AGEMA Thermovision 900, FLIR Systems, Bellerika, MA)